

Claims

- [c1] A preparation for topically delivering and localizing therapeutic agents, comprising:
a vasoconstrictor for retarding vascular dispersion of a therapeutic agent; and
a penetration enhancer for facilitating penetration of said vasoconstrictor and said therapeutic agent through a patient's skin.
- [c2] The preparation of [c1] , said vasoconstrictor comprising *phenylephrine*.
- [c3] The preparation of [c2] , wherein:
a clinical concentration of said *phenylephrine* is at least approximately 0.125%; and
said clinical concentration of said *phenylephrine* is at most approximately 1.0%.
- [c4] The preparation of [c3] , wherein said clinical concentration of said *phenylephrine* is approximately 0.5%.
- [c5] The preparation of [c1] , said vasoconstrictor comprising a vasoconstrictor selected from the vasoconstrictor group consisting of: *ephedrine sulfate*, *epinephrine*, *naphazoline*, and *oxymetazoline*.
- [c6] The preparation of [c1] , said penetration enhancer comprising

dimethylsulfoxide.

- [c7] The preparation of [c6] , wherein a clinical concentration of said *dimethylsulfoxide* is at most approximately 10%.
- [c8] The preparation of [c7] , wherein said clinical concentration of said *dimethylsulfoxide* is approximately 10%.
- [c9] The preparation of [c1] , said penetration enhancer comprising *lecithin*.
- [c10] The preparation of [c9] , said penetration enhancer further comprising *ethoxy diglycol*.
- [c11] The preparation of [c9] , wherein:
a clinical concentration of said *lecithin* is at least approximately 2%; and
said clinical concentration of said *lecithin* is at most approximately 50%.
- [c12] The preparation of [c11] , wherein:
said clinical concentration of said *lecithin* is approximately 10% to 12%.
- [c13] The preparation of [c1] :
said vasoconstrictor comprising *phenylephrine*; and
said penetration enhancer comprising *dimethylsulfoxide*.
- [c14] The preparation of [c13] , wherein:
a clinical concentration of said *phenylephrine* is at least

approximately 0.125%;

said clinical concentration of said *phenylephrine* is at most approximately 1.0%; and

a clinical concentration of said *dimethylsulfoxide* is at most approximately 10%.

[c15] The preparation of [c14] , wherein:
said clinical concentration of said *phenylephrine* is approximately 0.5%; and
said clinical concentration of said *dimethylsulfoxide* is approximately 10%.

[c16] The preparation of [c13] , wherein:
a ratio of a clinical concentration of said *dimethylsulfoxide* to a clinical concentration of said *phenylephrine* is at most approximately 40 to 1.

[c17] The preparation of [c1] :
said vasoconstrictor comprising *phenylephrine*; and
said penetration enhancer comprising *lecithin*.

[c18] The preparation of [c17] , said penetration enhancer further comprising *ethoxy diglycol*.

[c19] The preparation of [c17] , wherein:
a clinical concentration of said *phenylephrine* is at least approximately 0.125%;
said clinical concentration of said *phenylephrine* is at most

approximately 1.0%; and

a clinical concentration of said *lecithin* is at most approximately 50%.

[c20] The preparation of [c19] , wherein:
said clinical concentration of said *phenylephrine* is approximately 0.5%; and
said clinical concentration of said *lecithin* is approximately 10% to 12%.

[c21] The preparation of [c17] , wherein:
a ratio of a clinical concentration of said *lecithin* to a clinical concentration of said *phenylephrine* is at most approximately 200 to 1.

[c22] The preparation of [c1] , further comprising:
said therapeutic agent.

[c23] The preparation of [c22] , particularly for relieving pain,
comprising:
said therapeutic agent comprising a therapeutic pain-relieving agent;
said penetration enhancer for facilitating penetration of said therapeutic pain-relieving agent and said vasoconstrictor through the patient's skin; and
said vasoconstrictor for retarding vascular dispersion of said therapeutic agent.

- [c24] The preparation of [c23] , said therapeutic pain-relieving agent comprising:
a local anesthetic.
- [c25] The preparation of [c24] , said local anesthetic comprising *bupivacaine*.
- [c26] The preparation of [c25] , wherein:
a clinical concentration of said *bupivacaine* is at least approximately 2%; and
said clinical concentration of said *bupivacaine* is at most approximately 10%.
- [c27] The preparation of [c26] , wherein said clinical concentration of said *bupivacaine* is approximately 5%.
- [c28] The preparation of [c24] , said local anesthetic comprising a local anesthetic selected from the local anesthetic group consisting of: *mepivacaine, levobupivacaine, ropivacaine, chloroprocaine, procaine, lidocaine, etidocaine, benzocaine, tetracaine, and prilocaine*.
- [c29] The preparation of [c23] , said therapeutic pain-relieving agent comprising:
a quick-onset, short-acting non-steroidal anti-inflammatory agent.
- [c30] The preparation of [c29] , said quick-onset, short-acting non-steroidal anti-inflammatory agent comprising *ketoprofen*.

- [c31] The preparation of [c30] , wherein:
a clinical concentration of said *ketoprofen* is at least
approximately 5%; and
said clinical concentration of said *ketoprofen* is at most
approximately 20%.
- [c32] The preparation of [c31] , wherein said clinical concentration of
said *ketoprofen* is approximately 10%.
- [c33] The preparation of [c29] , said quick-onset, short-acting non-
steroidal anti-inflammatory agent comprising a quick-onset,
short-acting non-steroidal anti-inflammatory agent selected from
the quick-onset, short-acting non-steroidal anti-inflammatory
agent group consisting of: *diclofenac*, *diflunisal*, *etodolac*,
fenoprofen, *flurbiprofen*, *ibuprofen*, *indomethacin*, and *tolmetin*.
- [c34] The preparation of [c23] , said therapeutic pain-relieving agent
comprising:
a long-acting non-steroidal anti-inflammatory agent.
- [c35] The preparation of [c34] , said long-acting non-steroidal anti-
inflammatory agent comprising *piroxicam*.
- [c36] The preparation of [c35] , wherein:
a clinical concentration of said *piroxicam* is at least approximately
0.5%; and
said clinical concentration of said *piroxicam* is at most
approximately 4%.

- [c37] The preparation of [c36] , wherein said clinical concentration of said *piroxicam* is approximately 1.0%.
- [c38] The preparation of [c34] , said long-acting non-steroidal anti-inflammatory agent comprising a long-acting non-steroidal anti-inflammatory agent selected from the long-acting non-steroidal anti-inflammatory agent group consisting of: *celecoxib*, *meloxicam*, *nabumetone*, *naproxen*, *oxaprozin*, *rofecoxib*, *sulindac*, and *valdecoxib*.
- [c39] The preparation of [c23] , said therapeutic pain-relieving agent comprising:
a local anesthetic; and
a quick-onset, short-acting non-steroidal anti-inflammatory agent.
- [c40] The preparation of [c39] :
said local anesthetic comprising *bupivacaine*; and
said quick-onset, short-acting non-steroidal anti-inflammatory agent comprising *ketoprofen*.
- [c41] The preparation of [c23] , said therapeutic pain-relieving agent comprising:
a local anesthetic; and
a long-acting non-steroidal anti-inflammatory agent.
- [c42] The preparation of [c41] :
said local anesthetic comprising *bupivacaine*; and
said long-acting non-steroidal anti-inflammatory agent comprising

piroxicam.

[c43] The preparation of [c23] , said therapeutic pain-relieving agent comprising:
a quick-onset, short-acting non-steroidal anti-inflammatory agent;
and
a long-acting non-steroidal anti-inflammatory agent.

[c44] The preparation of [c43] :
said quick-onset, short-acting non-steroidal anti-inflammatory agent comprising *ketoprofen*; and
said long-acting non-steroidal anti-inflammatory agent comprising *piroxicam*.

[c45] The preparation of [c23] , said therapeutic pain-relieving agent comprising:
a local anesthetic;
a quick-onset, short-acting non-steroidal anti-inflammatory agent;
and
a long-acting non-steroidal anti-inflammatory agent.

[c46] The preparation of [c45] :
said local anesthetic comprising *bupivacaine*;
said quick-onset, short-acting non-steroidal anti-inflammatory agent comprising *ketoprofen*; and
said long-acting non-steroidal anti-inflammatory agent comprising *piroxicam*.

- [c47] The preparation of [c46] , wherein:
- a clinical concentration of said *bupivacaine* is at least approximately 2%;
 - said clinical concentration of said *bupivacaine* is at most approximately 10%;
 - a clinical concentration of said *ketoprofen* is at least approximately 5%;
 - said clinical concentration of said *ketoprofen* is at most approximately 20%;
 - a clinical concentration of said *piroxicam* is at least approximately 0.5%; and
 - said clinical concentration of said *piroxicam* is at most approximately 4%.
- [c48] The preparation of [c47] , wherein:
- said clinical concentration of said *bupivacaine* is approximately 5%;
 - said clinical concentration of said *ketoprofen* is approximately 10%; and
 - said clinical concentration of said *piroxicam* is approximately 1.0%.
- [c49] The preparation of [c22] , particularly for treating a viral disease, comprising:
- said therapeutic agent comprising an antiviral agent;
 - said penetration enhancer for facilitating penetration of said

antiviral agent and said vasoconstrictor through the patient's skin; and
said vasoconstrictor for retarding vascular dispersion of said antiviral agent.

[c50] The preparation of [c49] , said antiviral agent comprising 2-*deoxy-d-glucose*.

[c51] The preparation of [c50] , wherein:
a clinical concentration of said 2-*deoxy-d-glucose* is at least approximately 0.1%; and
said clinical concentration of said 2-*deoxy-d-glucose* is at most approximately 0.4%.

[c52] The preparation of [c51] , wherein:
said clinical concentration of said 2-*deoxy-d-glucose* is approximately 0.2%.

[c53] The preparation of [c49] , said antiviral agent comprising an antiviral agent selected from the antiviral agent group consisting of: *podofilox*, *acyclovir*, *penciclovir*, and *docosanol*.

[c54] The preparation of [c23] , particularly for relieving pain from a viral disease and treating the viral disease, comprising:
said therapeutic agent further comprising an antiviral agent;
said penetration enhancer for further facilitating penetration of said antiviral agent through the patient's skin; and
said vasoconstrictor for further retarding vascular dispersion of

said antiviral agent.

- [c55] The preparation of [c54] , said antiviral agent comprising *2-deoxy-d-glucose*.
- [c56] The preparation of [c55] , wherein:
a clinical concentration of said *2-deoxy-d-glucose* is at least approximately 0.1%; and
said clinical concentration of said *2-deoxy-d-glucose* is at most approximately 0.4%.
- [c57] The preparation of [c56] , wherein:
said clinical concentration of said *2-deoxy-d-glucose* is approximately 0.2%.
- [c58] The preparation of [c54] , said antiviral agent comprising an antiviral agent selected from the antiviral agent group consisting of: *podofilox*, *acyclovir*, *penciclovir*, and *docosanol*.
- [c59] The preparation of [c45] :
said vasoconstrictor comprising *phenylephrine*;
said penetration enhancer comprising a penetration enhancing agent selected from the penetration-enhancing agent group consisting of *dimethylsulfoxide* and *lecithin*;
said local anesthetic comprising *bupivacaine*;
said quick-onset, short-acting non-steroidal anti-inflammatory agent comprising *ketoprofen*; and
said long-acting non-steroidal anti-inflammatory agent comprising

piroxicam.

[c60] The preparation of [c59] , wherein:

- a clinical concentration of said *phenylephrine* is at least approximately 0.125%;
- said clinical concentration of said *phenylephrine* is at most approximately 1.0%;
- a clinical concentration of said *dimethylsulfoxide* is at most approximately 10%;
- a clinical concentration of said *lecithin* is at most approximately 50%;
- a clinical concentration of said *bupivacaine* is at least approximately 2%;
- said clinical concentration of said *bupivacaine* is at most approximately 10%;
- a clinical concentration of said *ketoprofen* is at least approximately 5%;
- said clinical concentration of said *ketoprofen* is at most approximately 20%;
- a clinical concentration of said *piroxicam* is at least approximately 0.5%; and
- said clinical concentration of said *piroxicam* is at most approximately 4%.

[c61] The preparation of [c60] , wherein:

- said clinical concentration of said *phenylephrine* is approximately

0.5%;

said clinical concentration of said *bupivacaine* is approximately 5%;

said clinical concentration of said *ketoprofen* is approximately 10%; and

said clinical concentration of said *piroxicam* is approximately 1.0%.

[c62] The preparation of [c45] , additionally for treating a viral disease, said therapeutic agent further comprising:
an antiviral agent.

[c63] The preparation of [c62] :
said vasoconstrictor comprising *phenylephrine*;
said penetration enhancer comprising a penetration enhancing agent selected from the penetration-enhancing agent group consisting of *dimethylsulfoxide* and *lecithin*;
said local anesthetic comprising *bupivacaine*;
said quick-onset, short-acting non-steroidal anti-inflammatory agent comprising *ketoprofen*;
said long-acting non-steroidal anti-inflammatory agent comprising *piroxicam*; and
said antiviral agent comprising *2-deoxy-d-glucose*.

[c64] The preparation of [c63] , wherein:
a clinical concentration of said *phenylephrine* is at least approximately 0.125%;

said clinical concentration of said *phenylephrine* is at most approximately 1.0%;

a clinical concentration of said *dimethylsulfoxide* is at most approximately 10%;

a clinical concentration of said *lecithin* is at most approximately 50%;

a clinical concentration of said *bupivacaine* is at least approximately 2%;

said clinical concentration of said *bupivacaine* is at most approximately 10%;

a clinical concentration of said *ketoprofen* is at least approximately 5%;

said clinical concentration of said *ketoprofen* is at most approximately 20%;

a clinical concentration of said *piroxicam* is at least approximately 0.5%;

said clinical concentration of said *piroxicam* is at most approximately 4%;

a clinical concentration of said *2-deoxy-d-glucose* is at least approximately 0.1%; and

said clinical concentration of said *2-deoxy-d-glucose* is at most approximately 0.4%.

[c65] The preparation of [c64] , wherein:

said clinical concentration of said *phenylephrine* is approximately

0.5%;

said clinical concentration of said *bupivacaine* is approximately

5%;

said clinical concentration of said *ketoprofen* is approximately

10%;

said clinical concentration of said *piroxicam* is approximately

1.0%; and

said clinical concentration of said *2-deoxy-d-glucose* is

approximately 0.2%.

- [c66] A method of topically delivering and localizing therapeutic agents, comprising the steps of:
- using a vasoconstrictor for retarding vascular dispersion of a therapeutic agent; in combination with
 - using a penetration enhancer for facilitating penetration of said vasoconstrictor and said therapeutic agent through a patient's skin.
- [c67] The method of [c66] , said step of using said vasoconstrictor further comprising the step of using *phenylephrine*.
- [c68] The method of [c67] , further comprising the steps of:
- using a clinical concentration of said *phenylephrine*, of at least approximately 0.125%; and
 - using said clinical concentration of said *phenylephrine*, of at most approximately 1.0%.

- [c69] The method of [c68] , further comprising the step of using said clinical concentration of said *phenylephrine*, of approximately 0.5%.
- [c70] The method of [c66] , said step of using said vasoconstrictor further comprising the step of using a vasoconstrictor selected from the vasoconstrictor group consisting of: *ephedrine sulfate*, *epinephrine*, *naphazoline*, and *oxymetazoline*.
- [c71] The method of [c66] , said step of using said penetration enhancer further comprising the step of using *dimethylsulfoxide*.
- [c72] The method of [c71] , further comprising the step of using a clinical concentration of said *dimethylsulfoxide*, of at most approximately 10%.
- [c73] The method of [c72] , further comprising the step of using said clinical concentration of said *dimethylsulfoxide*, of approximately 10%.
- [c74] The method of [c66] , said step of using said penetration enhancer further comprising the step of using comprising *lecithin*.
- [c75] The method of [c74] , said step of using said penetration enhancer further comprising the step of using *ethoxy diglycol*.
- [c76] The method of [c74] , further comprising the steps of:
using a clinical concentration of said *lecithin*, of at least approximately 2%; and

using said clinical concentration of said *lecithin*, of at most approximately 50%.

[c77] The method of [c76] , further comprising the step of:
using said clinical concentration of said *lecithin*, of approximately 10% to 12%.

[c78] The method of [c66] :
said step of using said vasoconstrictor further comprising the
step of using *phenylephrine*; and
said step of using said penetration enhancer further comprising
the step of using *dimethylsulfoxide*.

[c79] The method of [c78] , further comprising the steps of:
using a clinical concentration of said *phenylephrine*, of at least
approximately 0.125%;
using said clinical concentration of said *phenylephrine*, of at most
approximately 1.0%; and
using a clinical concentration of said *dimethylsulfoxide*, of at most
approximately 10%.

[c80] The method of [c79] , further comprising the steps of:
using said clinical concentration of said *phenylephrine*, of
approximately 0.5%; and
using said clinical concentration of said *dimethylsulfoxide*, of
approximately 10%.

[c81] The method of [c78] , further comprising the step of:

using a ratio of a clinical concentration of said *dimethylsulfoxide* to a clinical concentration of said *phenylephrine*, of at most approximately 40 to 1.

- [c82] The method of [c66] :
said step of using said vasoconstrictor further comprising the step of using *phenylephrine*; and
said step of using said penetration enhancer further comprising the step of using *lecithin*.
- [c83] The method of [c82] , said step of using said penetration enhancer further comprising the step of using *ethoxy diglycol*.
- [c84] The method of [c82] , further comprising the steps of:
using a clinical concentration of said *phenylephrine*, of at least approximately 0.125%;
using said clinical concentration of said *phenylephrine*, of at most approximately 1.0%; and
using a clinical concentration of said *lecithin*, of at most approximately 50%.
- [c85] The method of [c84] , further comprising the steps of:
using said clinical concentration of said *phenylephrine*, of approximately 0.5%; and
using said clinical concentration of said *lecithin*, of approximately 10% to 12%.
- [c86] The method of [c82] , further comprising the step of:

using a ratio of a clinical concentration of said *lecithin* to a clinical concentration of said *phenylephrine*, of at most approximately 200 to 1.

[c87] The method of [c66] , further comprising the step of:
using said therapeutic agent in combination with using said vasoconstrictor and using said penetration enhancer.

[c88] The method of [c87] , particularly for relieving pain:
said step of using said therapeutic agent further comprising the step of using a therapeutic pain-relieving agent; further comprising the steps of:
using said penetration enhancer for facilitating penetration of said therapeutic pain-relieving agent and said vasoconstrictor through the patient's skin; and
using said vasoconstrictor for retarding vascular dispersion of said therapeutic agent.

[c89] The method of [c88] , said step of using said therapeutic pain-relieving agent further comprising the step of using a local anesthetic.

[c90] The method of [c89] , said step of using said local anesthetic further comprising the step of using *bupivacaine*.

[c91] The method of [c90] , further comprising the steps of:
using a clinical concentration of said *bupivacaine*, of at least approximately 2%; and

using said clinical concentration of said *bupivacaine*, of at most approximately 10%.

[c92] The method of [c91] , further comprising the step of using said clinical concentration of said *bupivacaine*, of approximately 5%.

[c93] The method of [c89] , said step of using said local anesthetic further comprising the step of using a local anesthetic selected from the local anesthetic group consisting of: *mepivacaine*, *levobupivacaine*, *ropivacaine*, *chloroprocaine*, *procaine*, *lidocaine*, *etidocaine*, *benzocaine*, *tetracaine*, and *prilocaine*.

[c94] The method of [c88] , said step of using said therapeutic pain-relieving agent further comprising the step of using a quick-onset, short-acting non-steroidal anti-inflammatory agent.

[c95] The method of [c94] , said step of using said quick-onset, short-acting non-steroidal anti-inflammatory agent further comprising the step of using *ketoprofen*.

[c96] The method of [c95] , further comprising the step of:
using a clinical concentration of said *ketoprofen*, of at least approximately 5%; and
said clinical concentration of said *ketoprofen*, of at most approximately 20%.

[c97] The method of [c96] , further comprising the step of using said clinical concentration of said *ketoprofen*, of approximately 10%.

- [c98] The method of [c94] , said step of using said quick-onset, short-acting non-steroidal anti-inflammatory agent further comprising the step of using a quick-onset, short-acting non-steroidal anti-inflammatory agent selected from the quick-onset, short-acting non-steroidal anti-inflammatory agent group consisting of:
diclofenac, diflunisal, etodolac, fenoprofen, flurbiprofen, ibuprofen, indomethacin, and tolmetin.
- [c99] The method of [c88] , said step of using said therapeutic pain-relieving agent further comprising the step of using a long-acting non-steroidal anti-inflammatory agent.
- [c100] The method of [c99] , said step of using said long-acting non-steroidal anti-inflammatory agent further comprising the step of using *piroxicam*.
- [c101] The method of [c100] , further comprising the steps of:
using a clinical concentration of said *piroxicam*, of at least approximately 0.5%; and
using said clinical concentration of said *piroxicam*, of at most approximately 4%.
- [c102] The method of [c101] , further comprising the step of using said clinical concentration of said *piroxicam*, of approximately 1.0%.
- [c103] The method of [c99] , said step of using said long-acting non-steroidal anti-inflammatory agent further comprising the step of using a long-acting non-steroidal anti-inflammatory agent

selected from the long-acting non-steroidal anti-inflammatory agent group consisting of: *celecoxib*, *meloxicam*, *nabumetone*, *naproxen*, *oxaprozin*, *rofecoxib*, *sulindac*, and *valdecoxib*.

[c104] The method of [c88] , said step of using said therapeutic pain-relieving agent further comprising the steps of:
using a local anesthetic; and
using a quick-onset, short-acting non-steroidal anti-inflammatory agent.

[c105] The method of [c104] :
said step of using said local anesthetic further comprising the step of using *bupivacaine*; and
said step of using said quick-onset, short-acting non-steroidal anti-inflammatory agent further comprising the step of using *ketoprofen*.

[c106] The method of [c88] , said step of using said therapeutic pain-relieving agent further comprising the steps of::
using a local anesthetic; and
using a long-acting non-steroidal anti-inflammatory agent.

[c107] The method of [c106] :
said step of using said local anesthetic further comprising the step of using *bupivacaine*; and
said step of using said long-acting non-steroidal anti-inflammatory agent further comprising the step of using

piroxicam.

[c108] The method of [c88] , said step of using said therapeutic pain-relieving agent further comprising the steps of:
using a quick-onset, short-acting non-steroidal anti-inflammatory agent; and
using a long-acting non-steroidal anti-inflammatory agent.

[c109] The method of [c108] :
said step of using said quick-onset, short-acting non-steroidal anti-inflammatory agent further comprising the step of using *ketoprofen*; and
said step of using said long-acting non-steroidal anti-inflammatory agent further comprising the step of using *piroxicam*.

[c110] The method of [c88] , said step of using said therapeutic pain-relieving agent further comprising the steps of:
using a local anesthetic;
using a quick-onset, short-acting non-steroidal anti-inflammatory agent; and
using a long-acting non-steroidal anti-inflammatory agent.

[c111] The method of [c110] :
said step of using said local anesthetic further comprising the step of using *bupivacaine*;
said step of using said quick-onset, short-acting non-steroidal

anti-inflammatory agent further comprising the step of using *ketoprofen*; and
said step of using said long-acting non-steroidal anti-inflammatory agent further comprising the step of using *piroxicam*.

[c112] The method of [c111] , further comprising the steps of:
using a clinical concentration of said *bupivacaine*, of at least approximately 2%;
using said clinical concentration of said *bupivacaine*, of at most approximately 10%;
using a clinical concentration of said *ketoprofen*, of at least approximately 5%;
using said clinical concentration of said *ketoprofen*, of at most approximately 20%;
using a clinical concentration of said *piroxicam*, of at least approximately 0.5%; and
using said clinical concentration of said *piroxicam*, of at most approximately 4%.

[c113] The method of [c112] , further comprising the steps of:
using said clinical concentration of said *bupivacaine*, of approximately 5%;
using said clinical concentration of said *ketoprofen*, of approximately 10%; and
using said clinical concentration of said *piroxicam*, of

approximately 1.0%.

[c114] The method of [c87] , particularly for treating a viral disease: said step of using said therapeutic agent further comprising the step of using an antiviral agent; further comprising the steps of: using said penetration enhancer for facilitating penetration of said antiviral agent and said vasoconstrictor through the patient's skin; and using said vasoconstrictor for retarding vascular dispersion of said antiviral agent.

[c115] The method of [c114] , said step of using said antiviral agent further comprising the step of using *2-deoxy-d-glucose*.

[c116] The method of [c115] , further comprising the steps of: using a clinical concentration of said *2-deoxy-d-glucose*, of at least approximately 0.1%; and using said clinical concentration of said *2-deoxy-d-glucose*, of at most approximately 0.4%.

[c117] The method of [c116] , further comprising the step of: using said clinical concentration of said *2-deoxy-d-glucose*, of approximately 0.2%.

[c118] The method of [c114] , said step of using said antiviral agent further comprising the step of using an antiviral agent selected from the antiviral agent group consisting of: *podofilox*, *acyclovir*, *penciclovir*, and *docosanol*.

- [c119] The method of [c88] , particularly for relieving pain from a viral disease and treating the viral disease:
said step of using said therapeutic agent further comprising the step of using an antiviral agent; further comprising the steps of:
using said penetration enhancer for further facilitating penetration of said antiviral agent through the patient's skin; and
using said vasoconstrictor for further retarding vascular dispersion of said antiviral agent.
- [c120] The method of [c119] , said step of using said antiviral agent further comprising the step of using *2-deoxy-d-glucose*.
- [c121] The method of [c120] , further comprising the steps of:
using a clinical concentration of said *2-deoxy-d-glucose*, of at least approximately 0.1%; and
using said clinical concentration of said *2-deoxy-d-glucose*, of at most approximately 0.4%.
- [c122] The method of [c121] , further comprising the step of:
using said clinical concentration of said *2-deoxy-d-glucose*, of approximately 0.2%.
- [c123] The method of [c119] , said step of using said antiviral agent further comprising the step of using an antiviral agent selected from the antiviral agent group consisting of: *podofilox*, *acyclovir*, *penciclovir*, and *docosanol*.
- [c124] The method of [c110] :

said step of using said vasoconstrictor further comprising the step of using *phenylephrine*;

said step of using said penetration enhancer further comprising the step of using a penetration enhancing agent selected from the penetration-enhancing agent group consisting of *dimethylsulfoxide* and *lecithin*;

said step of using said local anesthetic further comprising the step of using *bupivacaine*;

said step of using said quick-onset, short-acting non-steroidal anti-inflammatory agent further comprising the step of using *ketoprofen*; and

said step of using said long-acting non-steroidal anti-inflammatory agent further comprising the step of using *piroxicam*.

- [c125] The method of [c124] , further comprising the steps of:
- using a clinical concentration of said *phenylephrine*, of at least approximately 0.125%;
 - using said clinical concentration of said *phenylephrine*, of at most approximately 1.0%;
 - using a clinical concentration of said *dimethylsulfoxide*, of at most approximately 10%;
 - using a clinical concentration of said *lecithin*, of at most approximately 50%;
 - using a clinical concentration of said *bupivacaine*, of at least

approximately 2%;
using said clinical concentration of said *bupivacaine*, of at most approximately 10%;
using a clinical concentration of said *ketoprofen*, of at least approximately 5%;
using said clinical concentration of said *ketoprofen*, of at most approximately 20%;
using a clinical concentration of said *piroxicam*, of at least approximately 0.5%; and
using said clinical concentration of said *piroxicam*, of at most approximately 4%.

[c126] The method of [c125] , further comprising the steps of:
using said clinical concentration of said *phenylephrine*, of approximately 0.5%;
using said clinical concentration of said *bupivacaine*, of approximately 5%;
using said clinical concentration of said *ketoprofen*, of approximately 10%; and
using said clinical concentration of said *piroxicam*, of approximately 1.0%.

[c127] The method of [c110] , additionally for treating a viral disease, said step of using said therapeutic agent further comprising the step of using an antiviral agent:

[c128] The method of [c127] :

said step of using said vasoconstrictor further comprising the step of using *phenylephrine*;

said step of using said penetration enhancer further comprising the step of using a penetration enhancing agent selected from the penetration-enhancing agent group consisting of *dimethylsulfoxide* and *lecithin*;

said step of using said local anesthetic further comprising the step of using *bupivacaine*;

said step of using said quick-onset, short-acting non-steroidal anti-inflammatory agent further comprising the step of using *ketoprofen*;

said step of using said long-acting non-steroidal anti-inflammatory agent further comprising the step of using *piroxicam*; and

said step of using said antiviral agent further comprising the step of using *2-deoxy-d-glucose*.

- [c129] The method of [c128] , further comprising the steps of:
- using a clinical concentration of said *phenylephrine*, of at least approximately 0.125%;
 - using said clinical concentration of said *phenylephrine*, of at most approximately 1.0%;
 - using a clinical concentration of said *dimethylsulfoxide*, of at most approximately 10%;
 - using a clinical concentration of said *lecithin*, of at most

approximately 50%;

using a clinical concentration of said *bupivacaine*, of at least

approximately 2%;

using said clinical concentration of said *bupivacaine*, of at most

approximately 10%;

using a clinical concentration of said *ketoprofen*, of at least

approximately 5%;

using said clinical concentration of said *ketoprofen*, of at most

approximately 20%;

using a clinical concentration of said *piroxicam*, of at least

approximately 0.5%;

using said clinical concentration of said *piroxicam*, of at most

approximately 4%;

using a clinical concentration of said *2-deoxy-d-glucose*, of at

least approximately 0.1%; and

using said clinical concentration of said *2-deoxy-d-glucose*, of at

most approximately 0.4%.

[c130] The method of [c129] , further comprising the steps of:

using said clinical concentration of said *phenylephrine*, of approximately 0.5%;

using said clinical concentration of said *bupivacaine*, of approximately 5%;

using said clinical concentration of said *ketoprofen*, of approximately 10%;

using said clinical concentration of said *piroxicam*, of approximately 1.0%; and
using said clinical concentration of said *2-deoxy-d-glucose*, of approximately 0.2%.

- [c131] The method of [c66] , further comprising the step of:
applying said vasoconstrictor and said penetration enhancer to the patient's skin.
- [c132] The method of [c78] , further comprising the step of:
applying said *phenylephrine* and said *dimethylsulfoxide* to the patient's skin.
- [c133] The method of [c82] , further comprising the step of:
applying said *phenylephrine* and said *lecithin* to the patient's skin.
- [c134] The method of [c87] , further comprising the step of:
applying said vasoconstrictor, said penetration enhancer, and said therapeutic agent to the patient's skin.
- [c135] The method of [c88] , further comprising the step of:
applying said vasoconstrictor, said penetration enhancer, and said therapeutic pain-relieving agent to the patient's skin.
- [c136] The method of [c89] , further comprising the step of:
applying said vasoconstrictor, said penetration enhancer, and said local anesthetic to the patient's skin.

- [c137] The method of [c90] , further comprising the step of:
applying said vasoconstrictor, said penetration enhancer, and
said *bupivacaine* to the patient's skin.
- [c138] The method of [c94] , further comprising the step of:
applying said vasoconstrictor, said penetration enhancer, and
said quick-onset, short-acting non-steroidal anti-inflammatory
agent to the patient's skin.
- [c139] The method of [c95] , further comprising the step of:
applying said vasoconstrictor, said penetration enhancer, and
said *ketoprofen* to the patient's skin.
- [c140] The method of [c99] , further comprising the step of:
applying said vasoconstrictor, said penetration enhancer, and
said long-acting non-steroidal anti-inflammatory agent to the
patient's skin.
- [c141] The method of [c100] , further comprising the step of:
applying said vasoconstrictor, said penetration enhancer, and
said *piroxicam* to the patient's skin.
- [c142] The method of [c110] , further comprising the step of:
applying said vasoconstrictor, said penetration enhancer, said
local anesthetic, said quick-onset, short-acting non-steroidal anti-
inflammatory agent, and said long-acting non-steroidal anti-
inflammatory agent to the patient's skin.

- [c143] The method of [c111], further comprising the step of:
applying said vasoconstrictor, said penetration enhancer, said *bupivacaine*, said *ketoprofen*, and said *piroxicam* to the patient's skin.
- [c144] The method of [c114], further comprising the step of:
applying said vasoconstrictor, said penetration enhancer, and said antiviral agent to the patient's skin.
- [c145] The method of [c115], further comprising the step of:
applying said vasoconstrictor, said penetration enhancer, and said *2-deoxy-d-glucose* to the patient's skin.
- [c146] The method of [c119], further comprising the step of:
applying said vasoconstrictor, said penetration enhancer, therapeutic pain-relieving agent, and said antiviral agent to the patient's skin.
- [c147] The method of [c120], further comprising the step of:
applying said vasoconstrictor, said penetration enhancer, therapeutic pain-relieving agent, and said *2-deoxy-d-glucose* to the patient's skin.
- [c148] The method of [c124], further comprising the step of:
applying said *phenylephrine*, said penetration enhancing agent selected from the penetration-enhancing agent group consisting of *dimethylsulfoxide* and *lecithin*, said *bupivacaine*, said *ketoprofen*, and said *piroxicam* to the patient's skin.

[c149] The method of [c127] , further comprising the step of:
applying said vasoconstrictor, said penetration enhancer, said
local anesthetic, said quick-onset, short-acting non-steroidal anti-
inflammatory agent, said long-acting non-steroidal anti-
inflammatory agent, and said antiviral agent to the patient's skin.

[c150] The method of [c128] , further comprising the step of:
applying said *phenylephrine*, said penetration enhancing agent
selected from the penetration-enhancing agent group consisting
of *dimethylsulfoxide* and *lecithin*, said *bupivacaine*, said
ketoprofen, said *piroxicam*,, and said *2-deoxy-d-glucose* to the
patient's skin.